



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,532	05/11/2005	Erhard Beck	PC10569US	4481
23122	7590	04/11/2007		
RATNERPRESTIA P.O BOX 980 VALLEY FORGE, PA 19482-0980			EXAMINER WILLIAMS, THOMAS J	
			ART UNIT	PAPER NUMBER
			3683	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/11/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/534,532

Applicant(s)

BECK ET AL.

Examiner

Thomas J. Williams

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the priority papers, the preliminary amendment, the oath and the information disclosure statement filed on May 11, 2005.

Specification

2. The abstract of the disclosure is objected to because lines 5-6 abruptly end without punctuation and constitute an incomplete sentence. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities: page 6 lines 33, the phrase "push rod 56" should be changed to "push rod 46".

Appropriate correction is required.

Claim Objections

4. Claim 30 objected to because of the following informalities: line 5, the recitation "wherein only valve is operated for charging the hydraulic high-pressure accumulator" appears to be missing some wording. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 23, 25, 29-34, 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3683

7. Claims 23, 29-34, 40 and 41 each recite the limitation "the pressure of the independent pressure source" in line 2. There is insufficient antecedent basis for this limitation in each of the claims.

8. Claim 25 recites the limitation "the high-pressure accumulator" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 21-30, 35-39 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2002/0096936 A1 to Ishida et al.

Re-claim 21, Sakata et al. teach a method for operating a hydraulic vehicle brake system, in which hydraulic pressure is introduced by means of a hydraulic booster HB, wherein the hydraulic pressure is metered directly into a master cylinder MC by way of a preceding hydraulic booster HB, and wherein the hydraulic pressure is controlled in accordance with a quantity representative of the driver's braking request, the pressure in the preceding hydraulic booster is controlled by actuation of at least two analog valves V1 and V2, see paragraph 11 lines 1-7 and lines 17-23.

Re-claim 22, valve V2 connects the hydraulic booster with a fluid supply tank RS, valve V1 controls supply of the pressure fluid from an independent pressure source AS to the hydraulic booster.

Art Unit: 3683

Re-claim 23, see pump unit HP and accumulator AC.

Re-claim 24, see master cylinder piston MP and 10.

Re-claim 25, see valves V1 and V2.

Re-claim 26, the driver actuates brake pedal BP as desired.

Re-claim 27, see paragraph 11 lines 23-29.

Re-claim 28, see pressure sensor P2.

Re-claim 29, see pump unit HP, high pressure accumulator AC and pressure sensor P1.

Re-claim 30, see pump unit HP, high pressure accumulator AC and check valve C1.

Re-claim 35, pump HP can add additional pressure as needed.

Re-claims 36-39, see paragraph 11.

Re-claim 41, see figure 1, the valves are interpreted as V1 and V2, or the valves associated with electronic control valve means HC, see paragraph 32.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 3683

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. in view of US 6,702,401 to Sherriff.

Ishida et al. teach a pressure of an independent source is generated by actuation of a motor pump unit HP and is stored in a hydraulic high-pressure accumulator AC. However, Sakata et al. fail to teach the charging operation of the hydraulic pressure accumulator starts before a bottom switch point of a pressure sensor at the high-pressure accumulator is reached.

Sherriff teaches a charging operation for a high-pressure accumulator, wherein the accumulator charging operation starts before a bottom switch point (such as either the warning pressure or precharge pressure) is reached. The charging operation starts at the cut-in pressure. It would have been obvious to one of ordinary skill in the art to have started the accumulator charging process of Ishida et al. before reaching a bottom switch as taught by Sherriff, thus providing a buffer between the point of charging and a minimum amount of pressurized fluid needed to operate the brake system.

14. Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. in view of US 4,914,917 to Schonlau.

Re-claims 32 and 34, Ishida et al. teach a pressure of an independent source is generated by actuation of a motor pump unit HP and is stored in a hydraulic high-pressure accumulator AC. However, Sakata et al. fail to teach the charging operation of the hydraulic pressure accumulator takes place in periods of rising or constant engine load of the driving engine of the vehicle; or wherein the charging operation of the hydraulic pressure accumulator takes place

Art Unit: 3683

when the engine load of the driving engine of the vehicle is equal to zero or lower than zero, and/or when a generally constant speed of the vehicle prevails.

Schonlau teaches a charging operation of a high-pressure accumulator wherein the charging process takes place after starting the vehicle, during this period the driving engine will have a constant engine load, which is equal to zero, and is broadly interpreted as having a constant engine speed (as measured in rpm). It would have been obvious to one of ordinary skill in the art to have commenced the accumulator charging process of Ishida et al. upon engine startup as taught by Schonlau, thus eliminating the need for maintaining accumulator pressure during periods when the vehicle is turned off, this will extend the life of the accumulator by reducing unnecessary wear.

15. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al. in view of US 4,656,833 to Belart.

Ishida et al. teach a pressure of an independent source is generated by actuation of a motor pump unit HP and is stored in a hydraulic high-pressure accumulator AC. However, Sakata et al. fail to teach the charging operation of the hydraulic pressure accumulator is discontinued upon brake application or in the event of an engine load of the driving engine of the vehicle.

Belart teaches a charging process for a high-pressure accumulator, wherein the charging process is prevented upon actuation of the brake pedal. Thus allowing the entire pressure medium to be delivered to the hydraulic pressure booster as needed, see column 2 lines 24-38. It would have been obvious to one of ordinary skill in the art to have provided the system of Ishida et al. with a process step for discontinuing the accumulator charging process when the brake

Art Unit: 3683

pedal is actuated as taught by Belart, thus providing the entire pressure medium for brake actuation as needed.

Allowable Subject Matter

16. Claim 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakata et al. teach a hydraulic pressure booster controlled by two analog valves.

18. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Wednesday-Friday from 6:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi, can be reached at 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

**THOMAS J. WILLIAMS
PRIMARY EXAMINER**

TJW

April 4, 2007

Thomas Williams
Au 3683
4-4-07